

EXHIBIT A

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

1

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION

Oracle America, Inc.

v. Case No. 3:10-cv-03561 WHA
Google Inc.

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
Video Deposition of Iain M. Cockburn, Ph.D.
Friday, February 10, 2012
Analysis Group
111 Huntington Avenue - 10th Floor
Boston, Massachusetts 02199

----- J. Edward Varallo, RMR, CRR -----

PAGES 1 - 178

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

89

1 in valuing patents, which is to focus upon the
2 patent as being the object of interest in an
3 economic or commercial sense. So I am not aware of
4 license negotiations which are conducted at the
5 level of specific claims, nor am I aware of efforts
6 to value patents or portfolios of patents outside of
7 a licensing negotiation which is conducted at the
8 level of distinguishing one claim from another. Nor
9 do I -- So that was the level at which I was
10 conducting this analysis, which is consistent both
11 with industry practice and what economists believe
12 is measurable in this context.

13 Secondly, I had an eye on, if you like, on
14 the analysis that I wrote in the other part of my
15 report where I asked myself the question: Is there
16 a meaningful difference for distinguishing or being
17 able to discriminate between damages in this context
18 and for these patents as applied to one claim versus
19 another claim?

20 And thirdly, I don't believe Dr. Reinhold
21 was able to conduct the work that he did at the
22 level of considering the contribution of individual
23 claims to the portfolio. Neither Dr. Reinhold nor
24 I, nor in my opinion persons engaged in a
25 hypothetical negotiation about this specific

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

90

1 portfolio of patents would have been thinking about
2 this portfolio as an aggregation of claims; they
3 would have been thinking about it as an aggregation
4 of patents.

5 Q. Is there anything in your report that
6 attempts to break out the value of the unasserted
7 claims of the patents in suit versus the asserted
8 claims?

9 A. I don't draw that distinction in this
10 apportionment analysis, no.

11 Q. Let's move on to paragraph 405 on page
12 152. I would like to talk a little bit about the
13 studies that you used as your reference for the
14 distribution of the value of the patents within the
15 portfolio.

16 MR. NORTON: I don't want to get in your
17 way. We're coming up on noon and if we could take a
18 break at some point in the near term, I'd appreciate
19 it.

20 MR. PURCELL: Yeah, that's fine, that's
21 fine.

22 BY MR. PURCELL:

23 Q. So in paragraph 405 you mention that you
24 used three recent studies of patent value to
25 document the distribution curves of the value of

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

93

1 A. Yes.

2 Q. Are you aware of any other similar studies
3 that reached conclusions that the top 1 percent of
4 the patents account for value outside of that 42 to
5 78 percent range?

6 A. Well, that may be. There may be some
7 numbers in some of these studies -- If you have
8 looked at them, I think you will appreciate that
9 many of them are complicated analyses that look at
10 different cuts of the data in different ways or use
11 different methodologies or try different
12 experiments. A range of 42 to 78 percent I think
13 spans in my view the range which the literature
14 points us to.

15 The stylized fact, if you like, if you
16 poked an economist who's worked on these problems
17 and asked them, you know, what share of the value of
18 a portfolio of patents would the top 1 percent
19 likely account for? I think they would likely say
20 "Well, probably 50 to 75 percent," based upon some
21 synthetic appreciation of all the results in the
22 literature.

23 Q. The three studies you relied on and that
24 are discussed in Exhibit 34 and Exhibit 35, there's
25 the PatVal study, the Harhoff study and the Barney

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

94

1 study?

2 A. Yes.

3 Q. Taking them one at a time, with respect to
4 the PatVal study, do you know how that study
5 selected the population of portfolios that it used
6 as its dataset?

7 A. Well, it didn't use a population of
8 portfolios; they looked at a population, a sample of
9 patents. The sample of patents was -- I mean, these
10 results come from a broader research project, which
11 was to survey European inventors about a variety of
12 things. One of the items of interest that the
13 people who conducted this study asked was for these
14 inventors to provide some information about the
15 value of one of their patents.

16 So the selection of that portfolio I think
17 roughly could be understood as a random sample of
18 inventors on patents from a particular application
19 cohort.

20 Q. The PatVal survey, was the dataset
21 exclusively European patents?

22 A. Yes.

23 Q. No U.S. patents?

24 A. No U.S. patents.

25 Q. And it was a sampling of patents from a

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

95

1 variety of inventors throughout Europe. Correct?

2 A. Yes.

3 Q. It wasn't looking specifically at
4 portfolios, it was constructing a portfolio by
5 aggregating patents taken from various inventors?

6 MR. NORTON: Objection to form.

7 A. Well, as I said, it wasn't a study about
8 portfolios; it was a study about patents. They
9 looked at a sample of patents.

10 Q. And they concluded that within that sample
11 of patents the distribution was significantly skewed
12 in terms of the value, with a small number of the
13 patents in that sample containing a large percentage
14 of the value?

15 A. Yes.

16 Q. What sorts of technology areas were
17 covered by the patents in the PatVal study?

18 A. Most.

19 Q. There wasn't any particular focus?

20 A. There was no particular focus, as I
21 recall. I mean, it was a broad-based study based on
22 a random sample of inventors.

23 Q. Okay, let's -- Well, strike that. Staying
24 with the PatVal study for a minute, how did that
25 study go about estimating the value of the patents

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

96

1 within the sample?

2 A. They asked the inventors to the extent
3 that they had knowledge about the value of their
4 patent to report on this survey instrument their
5 assessment of its value.

6 Q. Was that all done through self-reporting
7 by the inventors?

8 A. Yes, self-reporting.

9 Q. Was there any sort of auditing mechanism
10 that the study authors used to make sure that they
11 were getting good information from the inventors?

12 A. I'd have to check back, look at the paper.
13 I know from conversations with Dr. Gambardella, who
14 was one of the lead authors on this study, that they
15 had done some general and quite careful pretesting
16 and validation of the whole survey questionnaire.
17 I'd need to go back and look at the study report
18 more carefully to be able to answer that
19 definitively yes or no.

20 Q. In terms of asking the inventors about the
21 value of the patents, did the study for instance ask
22 them whether they licensed the patent for a sum of
23 money? How were the inventors asked to actually
24 calculate a value?

25 MR. NORTON: Objection to form.

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

97

1 A. Well, the inventors weren't asked
2 necessarily to calculate a value. They were asked
3 to report what they knew about the value of these
4 patents. So it could be that the patent had been
5 sold or reassigned outright, or it could be that
6 they were aware of licensing royalties, or it could
7 be that they used some other kind of data to....
8 I mean, they were assigning the value of a patent to
9 a specific number or a specific range of numbers.

10 Q. The inventors, was there any sort of
11 consistent valuation methodology that the inventors
12 used? For instance, did they all refer to revenue
13 that had been generated by the patents through some
14 products or was there some other way that value was
15 reported?

16 A. I'd need to go back and look at the
17 footnotes to the paper. I would characterize it
18 generally as self-reporting by inventors of their
19 knowledge or assessment of the value of these
20 patents.

21 MR. PURCELL: All right, let's take our
22 lunch break.

23 THE VIDEOGRAPHER: The time is 12:07 p.m.
24 We are going off the record. This will be the end
25 of tape 2 in the deposition of Dr. Iain Cockburn.

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

98

1 (Luncheon recess at 12:08 p.m.)
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

99

1

2

AFTERNOON SESSION

3

12:50 p.m.

4

5

6

7

8

THE VIDEOGRAPHER: We are back on the record. The time is 12:50 p.m. This is tape number 3 in the deposition of Dr. Iain Cockburn.

BY MR. PURCELL:

9

10

11

12

Q. Dr. Cockburn, before lunch we were discussing the studies that you relied on in assessing the value of the most valuable patents in the Sun portfolio. Do you recall that?

13

A. Yes.

14

15

16

17

Q. And we discussed the PatVal study. I would like to move on to the Harhoff study. Do you know how the sampling of the patents that were analyzed in that study were selected?

18

19

20

21

22

23

24

25

A. Well, again I'm a little bit hesitant to try to recall from memory specific details of these specific studies. I mean, I can reassure you as I did before lunch that I have looked carefully at these studies and satisfied myself that their methodology was in my view sound and that the results I could place some reliance upon in performing my analysis.

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

100

1 Q. Do you know if the Harhoff study looked at
2 patent portfolios and the distribution of value
3 within portfolios or did it look at individual
4 patents and their values as the PatVal study had
5 done?

6 A. I'd prefer if you showed me the document
7 and then I'll refresh my memory.

8 Q. Well, I don't have the document with me.

9 MR. NORTON: If the only obstacle is
10 having the document, we can get copies of those for
11 you.

12 BY MR. PURCELL:

13 Q. Do you recall how the Harhoff study went
14 about selecting the patents that it analyzed?

15 A. Well, I can't -- I reviewed for my own
16 interest as a referee for peer-reviewed journals
17 that have published this type of stuff and for other
18 purposes dozens of these kinds of papers; and I'm
19 afraid that, sitting here, I can't recall
20 specifically the answer to the question you're
21 asking with sufficient certainty to testify to it
22 under oath. I don't want to tell you, give you the
23 wrong answer when I'm referring to a methodology
24 which was in a similar paper by the same author or
25 some other such problem.

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

101

1 So I'll just reassure you that I have
2 reviewed the particular studies that I cite quite
3 carefully and I'm satisfied that they use a reliable
4 methodology.

5 Q. Do you know whether the Harhoff study
6 focused on any particular technology area?

7 A. As best I recall, it was agnostic with
8 respect to technologies.

9 Q. So it didn't focus on one specific
10 technology area, for instance, mobile or Java
11 technology as the Sun portfolio is concentrated in?

12 A. Well, no, it didn't. And I'll add to that
13 the observation that this literature, which has used
14 a variety of methods, a variety of indicia of patent
15 value, a variety of different samples, some of these
16 studies have done breakdowns by broad technology
17 classes such as biopharmaceutical versus electronic.
18 The finding which emerges with great regularity is
19 the one with which we began this discussion before
20 lunch, which is that there is this highly skewed
21 distribution and typically you would expect the top
22 1 percent of patents in any set of patents to
23 account for 50 to 75 percent, in round numbers, of
24 the economic value of the entire set.

25 Q. Do you know if the Harhoff study --

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

102

1 A. And that has held up, as I said, to
2 different time periods, different methodologies,
3 different sets of patents in different countries,
4 slicing and dicing by technology area and so forth.
5 I think it's a very robust and reliable result.

6 Q. Speaking of different countries, do you
7 know if the Harhoff study was looking at U.S.
8 patents or patents from some other geographic area?

9 A. The Harhoff study was focused, the
10 specific one I cite here I believe was focused on
11 German patents. I know Dr. Harhoff has done similar
12 research where he's matched the sample of German
13 patents he's used as best he could to their
14 equivalent patents in the United States and has
15 found broadly similar results.

16 Q. And was that done by Dr. Harhoff in the
17 study that you rely on and cite in this report or
18 some other study?

19 A. No, I think it was in another study.

20 Q. And, do you know, is that other study
21 cited anywhere in your report?

22 A. It's not cited in my report. It's almost
23 certainly cited, as I suggested to you, in the
24 references, the reference list at the backs of these
25 papers.

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

103

1 Q. And with respect to the Harhoff study, do
2 you know how the estimates of value of patents in
3 that study were derived? Was it self-reporting by
4 patentee again?

5 A. I think it's based essentially on self-
6 reporting. And I know in his work, you asked the
7 question before lunch about validation, and I know
8 Dr. Harhoff has -- whether or not it's in this
9 particular study, I'd have to look at the document.
10 But Dr. Harhoff has certainly, to my knowledge, made
11 efforts to value the reported -- to validate the
12 reported values of patents independently.

13 Now, with respect to the PatVal study, I
14 think that -- I don't know whether it's necessarily
15 reported in the document that I cite here, but I'm
16 pretty sure it's the case that for some subset of
17 the patents in their sample, they not only asked the
18 inventors for their assessment of the value of the
19 patent at the day it was issued, but they also
20 independently asked I think it was the inventor's
21 boss or senior manager or internal counsel or some
22 other independent person at the same organization to
23 provide an independent assessment of the value of
24 the same patent roughly in the same context.

25 So I think it's not the case, as you

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

104

1 appear to be suggesting to me, that these studies
2 don't attempt to validate the methodology.
3 Generally speaking they do. And whether it will be
4 reported in that specific paper that I cite or in
5 another paper which uses the same set of data and
6 performs a related study I can't pin down for you.

7 Q. Is there any discussion in the literature
8 of whether the distribution of the value of patents
9 within a portfolio is any different in the United
10 States versus other countries?

11 A. What comes to mind, as I think I just
12 said, the fact which emerges looking at the totality
13 of these studies is that the degree of skewness
14 observed is surprisingly similar across different
15 periods of time, different technologies, different
16 methodologies, you know, different ways of
17 approximating or deriving patent value.

18 Q. With respect to the Barney survey, I don't
19 know if you recall sitting here, but do you remember
20 how the population of patents analyzed in that
21 survey was determined?

22 A. Well, as I recall, I think it was about a
23 sample of 76,000 patents. Again, I think it -- I
24 think it was based on a particular application
25 cohort and not restricted to particular

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

105

1 technologies. But, I mean, that's my recollection
2 of it. I would want to confirm that by looking at
3 the study.

4 Q. And when you say application cohort, you
5 mean patents that were applied for during a
6 particular time period?

7 A. Yes.

8 Q. Do you recall the length of that time
9 period?

10 A. No. I'm thinking -- No, it's relatively
11 early in time, it might well be, although it was
12 applied for in a calendar year. Again, you know,
13 you're asking me to fish in my memory about
14 something that I can't be certain of.

15 Q. And the Barney study, that looked at U.S.
16 patents. Correct?

17 A. That looked at U.S. patents.

18 Q. The valuation of the individual patents in
19 the Barney study, how was that determined?

20 A. Well, the Barney study, I was just
21 speaking about a variety of methods. So the Barney
22 study is among those which look at whether or not a
23 patent is renewed in the sense of the assignee pays
24 their renewal fee at the Patent Office on the
25 required date and uses that as an indicator of a

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

106

1 lower bound on the value of the patent. If the
2 owner of the patent decides it's not worth paying
3 \$500 to renew the patent for the next period of its
4 term, then you know it's worth less than \$500.
5 Conversely, if they do decide to pay the annual fee,
6 it must be worth at least \$500.

7 This is an idea which goes back to some of
8 the very earliest studies on this topic done in the
9 early 1980s by Pakes, P-a-k-e-s, and Schankerman,
10 S-c-h-a-n-k-e-r-m-a-n.

11 Q. With respect to the population of patents
12 that were renewed and that are worth \$500 or more,
13 how did the Barney study go about determining more
14 specific values of those patents?

15 A. Well, you can back out from these data
16 inferences about the value of patents at different
17 points based upon these lower-bound numbers where
18 you know a fraction dropping out are worth less than
19 some number.

20 Q. Did the Barney study look at anything
21 other than whether or not patents within the
22 population were renewed in determining value and
23 then drawing conclusions from that fact?

24 MR. NORTON: Objection to form.

25 A. Well, there's two pieces of information,

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

107

1 one of which is: Was the renewal fee paid? And
2 secondly with respect to how much is the remaining
3 lifetime of the patent? So the Barney study is
4 driven off of those two things, which he uses to
5 infer some value.

6 None of these -- So looking at renewal
7 fees is one way people have looked at this. Other
8 studies have looked at reassignment of patents.
9 Other studies have looked at what we call
10 bibliometric indicators, such as citations or the
11 pattern of citations. There's a lot of correlates
12 to the economic value of patents which have been
13 looked at in this sense.

14 What I believe I have been able to show
15 here is I've looked at a variety of studies which
16 use a variety of methods and base their conclusions
17 on a variety of indicators of patent value, to show
18 that they all come back to the same conclusion.

19 Q. What if anything did you do to satisfy
20 yourself that the population of patents that were
21 examined in these studies are comparable to the Sun
22 portfolio that is at issue in this case?

23 A. I think I didn't -- You know, I wasn't
24 able in the time available to conduct my own, if you
25 like, reference study. I could imagine one might

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

108

1 want to try to replicate the methodology of one of
2 these studies but to a sample of patents which was
3 constructed to look like the portfolio in question.
4 One could imagine there's things one could do. I
5 don't know that they're feasible to do quickly or
6 reliably.

7 What I -- My conclusion here is based on
8 the assumption that this portfolio of patents is
9 similar in the sense -- Let me try to say this more
10 coherently.

11 As I've said a few times, it's striking
12 that these types of studies done for many different
13 sets of patents and in many different contexts using
14 many different methodologies all point to a
15 conclusion which I don't think is controversial,
16 which is that the value distribution is highly
17 skewed. So based upon that, it is my opinion that I
18 have no reason to believe that the 569 patents of
19 interest here would have a value distribution which
20 is any less skewed than that which has been found so
21 many times in so many different circumstances.

22 Q. Are you aware of any studies that have
23 looked at a single portfolio of patents -- Strike
24 that.

25 Are you aware of any studies that have

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

124

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

125

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

133

1 Q. So we've talked about the importance of
2 the functionality, the importance of the patents to
3 improving the functionality, and the lack of good
4 alternatives to the patented technology. What other
5 bases are there for your independent significance
6 approach besides those?

7 A. I'm sorry. Could we maybe take a break?
8 I'm really struggling to hold your questions in my
9 mind as you formulate them. If you would like to
10 repeat it, I can try to answer it.

11 Q. Sure. Would you like to take a break?
12 Well, if it's something that's going to be fixed by
13 taking a break.... I'm happy to repeat the
14 question.

15 We have discussed the importance to Google
16 of certain functionality, the benefits the patents
17 provide in improving that functionality, and the
18 lack of non-infringing alternatives. And I'm
19 wondering what other bases are there for your
20 independent significance approach other than those
21 things?

22 A. Well, I don't know that I would
23 characterize the bases of my independent
24 significance approach using the categories or the
25 labels that you are using. I base my evaluation of

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

134

1 the significance of these patents relative to other
2 patents that might be in the portfolio based upon a
3 variety of evidence.

4 Q. All right. Well, why don't you tell me
5 what that evidence is.

6 A. Which is discussion in the record as to
7 the value that Google itself placed upon this type
8 of functionality; benchmarking studies that I did or
9 engineers at Oracle did; the work that Dr. Shugan
10 did using conjoint analysis to evaluate user
11 preferences or the significance of this
12 functionality as a basis for demand.

13 My qualitative findings from econometric
14 work I would not say were a basis for this
15 determination that I relied upon determinatively but
16 it's certainly something I considered to the extent
17 that I believe my econometric work demonstrates
18 another way of demonstrating the relationship of the
19 patented functionality to consumer demand. I look
20 also at Dr. Reinhold's work in grouping and ranking
21 these patents in terms of their technical merit or
22 significance.

23 So that's the range of evidence that I
24 look to and consider in arriving at my determination
25 as to an apportionment percentage based upon this

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

135

1 independent significance approach.

2 Q. Is there anything else that forms the
3 basis of your independent significance approach
4 other than the things you've just listed?

5 A. Those are the specific criteria, the
6 specific studies or pieces of evidence or things
7 I've taken into consideration. I have also relied
8 upon my general knowledge and experience, my
9 participation in and knowledge of the academic
10 researches in this field, the work that I've done
11 with the Licensing Executives Society on
12 understanding licensing practices and related issues
13 which relate to patent valuation; dozens of
14 conversations over the years with people involved in
15 licensing or valuing or managing intellectual
16 property. All of those things put together inform
17 the basis of my independent significance assessment.

18 MR. NORTON: Mr. Purcell, before you go on
19 to the next question, do you still need a break?

20 THE WITNESS: I really would like to take
21 a break, if you don't mind.

22 MR. PURCELL: Yes, that's fine.

23 THE VIDEOGRAPHER: The time is 1:57 p.m.
24 We are going off the record.

25 (Short recess taken.)

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

136

1 THE VIDEOGRAPHER: We are back on the
2 record. The time is 2:09 p.m.

3 BY MR. PURCELL:

4 Q. Dr. Cockburn, before the break we were
5 talking about the bases of your independent
6 significance approach. Correct?

7 A. Correct.

8 Q. You rely on those bases to reach an
9 apportionment figure of 25 percent for the patents
10 in suit. Correct?

11 A. Correct.

12 Q. How do you get the 25 percent?

13 A. Well, it's a judgment based on my
14 expertise and my consideration of the evidence that
15 we talked about just before the break.

16 Q. Is there any quantification in the
17 evidence that we talked about before the break that
18 you can point me to in supporting the 25 percent
19 conclusion?

20 A. Are you asking about -- ? I'm sorry. Did
21 you ask me was there any of the evidence
22 quantitative?

23 Q. Correct.

24 A. Well, certainly. So the results of
25 benchmarking are quantitative evidence. The factor

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

137

1 by which execution speed is affected by disabling
2 the patented functionality, I mean, that's a hard
3 number. That's 80 percent. The conjoint analysis,
4 the results of the conjoint analysis have a
5 quantitative expression as to how users' preferences
6 would drive a counterfactual set of market shares in
7 the experiment that Dr. Shugan conducted based upon
8 his conjoint survey. To the degree that I looked to
9 the dollar implications, these market share impacts,
10 which as I suggested and told you earlier, I think
11 are corroborative or supportive but not
12 determinative of my assessment of 25 percent.

13 I mean, those are numbers, 50 or 75 or 100
14 million dollars in what I call incremental Android
15 revenue to Google will be at stake depending on
16 whether or not you had implemented the patented
17 functionality or not. So all those are quantitative
18 facts that go into and form part of my assessment,
19 my evaluation.

20 Q. How do you get from those numbers that you
21 just cited in the data to the 25 percent conclusion?

22 A. Oh, so you're asking me do I have a
23 formula into which I could plug those numbers and
24 that would give an answer which equals 25 percent?

25 Q. Well, that would be one way of doing it.

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

138

1 Have you done it that way?

2 A. No.

3 Q. Without having a hard and fast formula
4 that would lead to the 25 percent, is there any line
5 you can draw from any sort of quantitative base
6 figure to the 25 percent?

7 MR. NORTON: Objection to form.

8 A. No. My conclusion that at least 25
9 percent is based upon my synthetic assessment of all
10 of that evidence in light of my knowledge and
11 experience and expertise.

12 Q. You said in your report at one point, I
13 know we discussed this earlier, that the conjoint
14 analysis was not used in the independent
15 significance approach. If you want to look at the
16 text, it's in paragraph 423.

17 A. I hope I was clear in my answer to that
18 question, and maybe I wasn't, that perhaps that is
19 not as well worded as it might be. What I meant by
20 that sentence was I don't rely upon the application
21 of conjoint analysis in the way that I did in my
22 September report to form my independent significance
23 assessment.

24 Q. And in what way do you rely on it in
25 forming your independent significance assessment?

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

139

1 Strike that. Let me ask it again.

2 In what way do you rely on Dr. Shugan's
3 conjoint analysis in forming your independent
4 significance assessment?

5 A. Didn't I -- ? Didn't you ask me this this
6 morning?

7 Q. I may have done.

8 MR. NORTON: I'll object on that ground.
9 But answer the question.

10 A. Well, I rely on it specifically in coming
11 up with my determination that the patents in suit
12 constitute at least 25 percent of the value of the
13 intellectual property component of the 2006 license
14 bundle. Qualitatively in the sense it's my judgment
15 looking at the results of Dr. Shugan's analysis that
16 the functionality enabled by the patents or by the
17 copyrighted APIs has a substantial and significant
18 impact upon user preferences as translated into the
19 market share predictions of the conjoint model.

20 Q. Do you rely on the conclusions of the
21 conjoint model -- Strike that. Do you rely on any
22 of the quantitative conclusions of the conjoint
23 model in developing your independent significance
24 approach?

25 A. Well, yes. I think it's both informative

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

140

1 qualitatively and quantitatively in that the market
2 share effects are not just statistically
3 significant; they're also pretty large. The
4 impacts, if you go to Exhibit 5 in my report --

5 Q. Did you want to point me to something in
6 Exhibit 5?

7 A. As I was going to go on to say there, I
8 find Dr. Shugan's work, and maybe I think we need to
9 go look at Shugan Exhibits 4A and 4B, in and of
10 themselves looking at those conjoint studies, points
11 me to a substantial value placed by users.
12 Substantial also, as I suggested earlier, translates
13 into significant impacts in terms of dollars or
14 market share. So I would --

15 Q. When -- Go ahead.

16 A. That's quantitative information that
17 I take into account in forming my assessment of at
18 least 25 percent.

19 Q. You keep saying at least 25 percent.
20 What's the upper bound of that range if 25 percent
21 is the lower bound?

22 A. Focusing on this synthetic evaluation of
23 this range of evidence would lead me to think that
24 these patents are important, they're economically
25 significant, reflecting on the share of portfolio

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

141

1 value. That they are an important or economically
2 significant set of patents would constitute, would
3 suggest to me that something in the range of at
4 least 25, possibly 50 percent, possibly more, of the
5 portfolio value could be attributed to those
6 patents.

7 Q. Where is the 50 percent or more number
8 mentioned in your report?

9 A. It isn't. You just asked me about it. My
10 opinion is that it's at least 25 percent.

11 Q. Do you intend to tell the jury that the
12 independent significance approach could result in an
13 apportionment of 50 percent or more?

14 MR. NORTON: Objection to form.

15 A. 50 percent or more? Well, if you asked me
16 on the witness stand could it be 50 percent or more,
17 then my answer would be yes, it could be.

18 Q. Based on --

19 A. I'm comfortable with my opinion as stated,
20 which is at least 25 percent.

21 Q. But just to be clear, the 50 percent or
22 more figure, we're hearing that for the first time
23 today in this deposition. Correct?

24 MR. NORTON: Objection to form.

25 A. 50 percent is not in my report. I'm just

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

142

1 trying to be responsive to your question.

2 Q. So whether the number is 25 percent or
3 50 percent or more under the independent
4 significance approach, is there any more specific
5 way you can describe how you get to that result
6 other than saying you synthesized all of the various
7 inputs we've discussed and come out with that
8 number?

9 A. So I have synthesized those inputs and I
10 have put them in the context of my general knowledge
11 and experience and my consideration of the
12 fundamental economics that are at work here, the
13 broader context in which we are considering this
14 hypothetical negotiation. And in light of that and
15 in light of my assessment of the importance of these
16 patents, it is my opinion that at least 25 percent
17 of the portfolio value should be attributed to the
18 patents in suit. I don't think I can add to that.

19 Q. Just taking a look at Exhibit 5, which
20 I think you have in front of you.

21 A. Yes.

22 Q. Does Exhibit 5, the third column of
23 Exhibit 5, reflect the fact that when the '205
24 patent functionality was disabled, the performance
25 of the e-mail and camera functions actually

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

151

1 certainly involves more APIs and the question is:
2 Would the value conveyed to Sun under this agreement
3 be understood to include copyrights to those and
4 additional APIs other than the 37?

5 I think it's a little bit of a stale
6 dispute or a moot question in my mind because I
7 think that -- I don't think there's any economic
8 basis to believe that the value of a copyright to a
9 larger number of APIs will be any different from the
10 value of a copyright to 37 APIs specifically.

11 Q. What about copyrighted works other than
12 APIs and code libraries? Did you take those into
13 account?

14 MR. NORTON: Objection to form.

15 A. I'm not aware that there's any other
16 copyrights at stake.

17 Q. What is your basis for your understanding
18 of which copyrights are at stake?

19 A. Well, I haven't seen any other specific
20 copyrights identified. If you can suggest something
21 to me that --

22 Q. Do you know how many copyrighted works
23 related to Java Sun owned as of mid 2006?

24 MR. NORTON: Objection to form.

25 A. Are you asking me about the totality of

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

152

1 copyrighted material which has any relation to Java
2 owned by Sun?

3 Q. Let's start there, sure.

4 A. Well, I don't know. If you counted them
5 up individually, assuming there's one copyright to
6 one small document, it could run into quite large
7 numbers of specific copyrights.

8 I think what's important here is to focus
9 on what's understood to be licensed within the terms
10 of the agreement --

11 Q. Which is --

12 MR. NORTON: I'm sorry. You're
13 interrupting the witness's answer.

14 MR. PURCELL: I think he's done.

15 THE WITNESS: No, I'm not done.

16 A. Within the terms of the agreements or the
17 draft agreements, which as I recall have clauses
18 which quite specifically limit the intellectual
19 property to be conveyed by Sun to Google. I can't
20 recall the precise language sitting here, but if you
21 show me the agreement, I'll point you to it.

22 Q. So it is your understanding that the
23 copyright component of the 2006 bundle in the draft
24 agreements was limited to just API specifications
25 and code libraries?

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

153

1 A. It is limited in the first place to
2 copyright which would meet the limitations of
3 copyrighted material which would be used to be
4 covered by the limitations in the draft agreements,
5 principally the APIs and the underlying code
6 libraries.

7 Q. Is there any reference in any of the draft
8 agreements to API libraries or API specifications
9 and code libraries?

10 A. I don't recall. You'd have to show me the
11 agreement.

12 Q. What is your basis for your belief that
13 the copyright component of the 2006 bundle is
14 limited only to copyrighted API specifications and
15 code libraries?

16 A. Well, I think it's a question of looking
17 at -- It's a question of understanding what the
18 limitations are in the agreements. One of the
19 important limitations here, as I understand it, is
20 that it refers to technology intellectual property
21 which is limited to the product specifications as
22 laid out in that PRD document. And I think there's
23 the PRD document; there's communication between the
24 parties. What these are pointing me to are
25 relatively a small set of copyrights that are to be

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

154

1 conveyed specifically by the agreement.

2 Now, I know there may be other pieces of
3 code floating around in which a copyright may or may
4 not rest, some of which may or may not be in the
5 public domain. I think the identifiable pieces of
6 copyrighted material are principally the APIs.

7 Q. What is your basis for suggesting that the
8 parties in 2006 were contemplating a copyright
9 license that would only extend to APIs?

10 A. That's a limitation in the agreement that
11 Sun is going to convey copyrights as necessary. As
12 I understand them in broad brush, and again I'm not
13 a lawyer and I don't have an opinion as to the
14 specific legal language here, but Sun is conveying
15 copyrights necessary for Google to implement a
16 product as described in the PRD document. Sun is
17 not conveying an unlimited copyright to any and all
18 copyrighted materials owned by Sun, and that's
19 ridiculous.

20 Q. Sun's Java mobile platform -- Strike that.
21 There were additional copyrights associated with
22 Sun's Java mobile platform apart from just API
23 specifications and code libraries. Correct?

24 MR. NORTON: Objection to form.

25 A. I'm not sure what you mean. Can you be

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

155

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

156

1 anything specific other than APIs and associated
2 underlying code libraries.

3 Q. Sun also wrote the source code underlying
4 its implementation of the Java virtual machine.
5 Correct?

6 A. Correct.

7 Q. And that source code is copyrighted.
8 Correct?

9 A. Correct.

10 Q. What is your basis for thinking that the
11 2006 bundle would have excluded that copyrighted
12 source code?

13 MR. NORTON: Objection to form.

14 A. I'm sorry. Can you repeat the previous
15 question before you asked me what my basis was? Or
16 just --

17 Q. The source code underlying Sun's
18 implementation of the Java virtual machine is
19 copyrighted. Correct?

20 MR. NORTON: Objection to form.

21 A. Correct.

22 Q. So what is your basis for your opinion
23 that the copyright aspect of the 2006 bundle would
24 exclude that copyrighted source code?

25 MR. NORTON: Objection to form.

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

157

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

158

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

159

[REDACTED]

10 MR. PURCELL: Let's change the tape.

11 THE VIDEOGRAPHER: The time is 2:56 p.m.
12 we are going off the record. This will be the end
13 of tape 3 in the deposition of Dr. Iain Cockburn.

14 (Short recess taken.)

15 THE VIDEOGRAPHER: We are back on the
16 record. This is tape number 4. The time is 3:05
17 p.m. This is the deposition of Dr. Iain Cockburn.

18 BY MR. PURCELL:

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

160

[illegible]

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

163

1 complementary products to your platform in ensuring
2 its success and so forth. It's not just that the
3 APIs are required in order to attract the Java
4 developer community. It's that the Java developer
5 community, being involved, being engaged in
6 increasing numbers in the Android ecosystem, is a
7 critical part of the business model and generates a
8 substantial amount of the value to Google of
9 Android.

10 So the qualitative evidence in the record,
11 my understanding of the basic economics of the
12 situation and indeed some of the evidence from the
13 conjoint study as to user value of applications all
14 go into my opinion that it is at least 12.5 percent.
15 I think that's a very low number and could be a lot
16 higher.

17 Q. How high could it be?

18 A. Well, if the ability to develop a vibrant
19 application developer community is make or break for
20 this platform, as it appears to have been for other
21 attempts to create such ecosystems such as, if you
22 like, the last gasp of Palm as an independent
23 platform, trying to sell a Palm OS or recent efforts
24 to reincarnate WebOS, many of these things seem to
25 be perfectly good technologies in terms of their

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

164

1 technical merit. It is just that they fail in the
2 marketplace because they cannot attract the supply
3 of complementary applications.

4 So if it was indeed the case that not
5 having access to the core Java APIs was going to
6 throw sufficient sand into the gears of the virtuous
7 circle or the positive feedback loop which drives
8 these dynamics, then it might well be the case that
9 Android would have been a complete flop purely on
10 those grounds, in which case you might argue that
11 100 percent of the value of the agreement could be
12 attributed just to the copyrights.

13 Q. And is that in addition to the 50 percent
14 or more that could be attributed to the patents?

15 A. That would trump the patents. That's not
16 going to be additive. It can't be more than a
17 hundred percent of the value.

18 Q. My question was somewhat facetious.

19 So how do you get to the 12-1/2 percent,
20 given those qualitative inputs and Dr. Shugan's
21 conjoint analysis? Why do you pick 12-1/2 percent
22 rather than some other number?

23 A. By looking, if you like, for a floor or
24 lower bound on this number, I was certainly guided
25 in my thinking by a recognition that the conjoint

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

178

1 COURT REPORTER'S CERTIFICATE

2 I, J. Edward Varallo, RMR, CRR, Registered
3 Professional Reporter and Notary Public in the
4 Commonwealth of Massachusetts (my commission expires
5 12/24/2015), hereby certify that the deposition of
6 Iain M. Cockburn, Ph.D. taken on February 10, 2012,
7 in the matter of Oracle America, Inc. v. Google Inc.
8 was recorded by me stenographically and transcribed;
9 that before being sworn by me, the deponent provided
10 satisfactory evidence of identification as required
11 by Executive Order 455 (03-13) of the Governor.

12 I certify that the deposition transcript
13 produced by me is true and accurate to the best of
14 my ability.

15 I certify further that I am not counsel,
16 attorney, or relative of any party litigant, and
17 have no interest, financial or otherwise, in the
18 outcome of this suit.

19

20

21

22

23

24 DATED: 2/20/2012

J. Edward Varallo

25